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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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John W. Taylor

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EXAMINER

UTAMA, ROBERT J

ART UNIT

PAPER NUMBER

3714

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/767,321	Applicant(s) TAYLOR ET AL.	
	Examiner ROBERT J. UTAMA	Art Unit 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the application

1. This office action is a response to the argument and amendment filed on: 02/21/2008. The current status of the claim are as follow: claims 1-8 are still pending, claims 9-10 have been cancelled and claims 11-14 have been withdrawn from consideration.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claim 1-8 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 set forth the limitation of having "a third page corresponding to the first page of the first plurality of the successive page" and having a "fourth page corresponding to the second page of the first plurality of successive page spreads". The specification failed to provide a teaching having such limitations. Furthermore, the examiner does not understand how a third page can be associated with the first page of the first plurality of successive page since they are two distinct objects. Claims 2-8 are also rejected since they are dependant upon a rejected claim.
5. Claim 1-8 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 set forth the limitation of having "a third page corresponding to the first page of the

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first plurality of the successive page" and having a "fourth page corresponding to the second page of the first plurality of successive page spreads". The specification provided at the time of the filing the application failed to disclose such limitations.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Jeng US

4,809,246

Claim 1: Jeng provides a teaching of a book encoded for optical page identification (see Jeng FIG. 2 item H1-H3). Jeng provides a teaching a first sequence of page identifiers associated with a first sequence of the plurality of successive of the first sequence of successive page identifiers (see Jeng FIG. 2 item 6a and 7a) and the first sequence of successive page identifiers comprising overlayable arrangement of open-hole and closed-hole location (see Jeng col. 3:40-52), each successive arrangement of the sequence increasing in total number of open hole location by at least one open hole location (see Jeng Col. 5:12-22).

Jeng provides a teaching a second sequence of page identifiers associated with a first sequence of the plurality of successive of the first sequence of successive page identifiers) and the first sequence of successive page identifiers comprising overlay able arrangement of open-hole and closed-hole location, each successive arrangement of the sequence decreasing in total number of open hole location by at least one open hole location. However, the examiner notes that the Jeng's overall teaching is that one page can be differentiated from another by page by

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having at least one hole different between one page and next page as seen in the example of FIG 5 and col. 5:15-20. It would have been obvious to have a set of page identifiers that correspond the other page spread, having an overlay-able arrangement of adjoining open and close hole location, each successive arrangement of the decreasing in total number of open hole location by at least one open hole location by duplicating the code found in Jeng Col. 5:12-22 and arranging such that there is always one open hole difference between consecutive page. The examiner also provides how such duplication can be accomplished (see Table 1 below). The examiner also notes that one can extend the number of pages that can be detected simply by duplicating the page marking and the photo sensor (FIG 5. item P1-P4).

0000	duplicated	4 open
0001	duplicated	3 open
0011	duplicated	2 open
0111	duplicated	1 open
1111	Jeng's disclosure	0 open
0111	Jeng's disclosure	1 open
0011	Jeng's disclosure	2 open
0001	Jeng's disclosure	3 open
0000	Jeng's disclosure	4 open

Table 1 page identifier and code duplication

Therefore, the examiner concludes that the Jeng references discloses the claim invention except for the limitation of a second sequence of page identifiers associated with a first sequence of the plurality of successive of the first sequence of successive page identifiers) and the first sequence of successive page identifiers comprising overlay able arrangement of open-hole and closed-hole location, each successive arrangement of the sequence decreasing in total number of open hole location by at least one open hole location. It would have been obvious to one having ordinary skilled in the art to create a second sequence of successive page

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identifiers by duplicating the code and sensor array disclose in the Jeng references (see earlier explanation and Table 1) in order to increase the number of pages that can be encoded. It has been held that mere duplication of essential working parts of device involves only routine skill in the art. *St Regis Paper Co. v. Bemis Co.* 193 USPQ 8.

Jeng does not provide an explicit teaching of having a first plurality of successive page spreads that terminates with a final page spread and a second plurality of successive page spreads that begins with an initial page spread. However, the examiner takes the position that it is inherent that any book has successive page spreads that ends with final page spread and begins with an initial page spread and that any part of the book can be identified as a first and second plurality of page spreads (see Table 2).

The Jeng reference does not provide a teaching of a separator page between the final page spread of the first plurality of successive page spreads and the initial page spreads of the second plurality of successive page spreads, the separator page comprised of a fifth and sixth page, the fifth page having a closed hole location corresponding to the each open hole location of the first page of the final page spreads and the sixth page having a closed-hole location corresponding to each open-hole location of the fourth page of the initial page of the second plurality of successive page spreads. However, the examiner contends that the page separator would be naturally formed when the examiner suggest the code reflection in table 1 and as demonstrated in table 2. Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of of a separator page between the final page spread of the first plurality of successive page spreads and the initial page spreads of the second plurality of successive page spreads, the separator page comprised of a fifth and sixth page, the fifth page having a closed hole location corresponding to the each open hole location of the first page of the final page spreads and the sixth page having a closed-hole location corresponding to each open-hole location of the fourth page of the initial page of the second plurality of successive

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page spreads, because it would enable the system to detect the maximum number of pages that can be detected in a system.

Page Left	Page Right	Page type
-----	0001	First plurality (book closed showing only the front book cover)
1000	0011	First plurality (book open page 1 and page 2)
1100	0111	First plurality (book open page 3 and page 4)
1110	1111	First plurality (book open page 5 and page 6)
1111	1111	Page separator (book open page 7 and page 8)
1111	0111	Second plurality (book open page 9 and page 10)
1110	0011	Second plurality (book open page 11 and page 12)
1100	0001	Second plurality (book open page 13 and page 14)
1000	-----	Second plurality (book closed showing only the book back cover)

Table 2 first and second plurality page spreads

8. Claim 2-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Jeng US 4,809,246 and in view of Kim et al US 6,865,367

Claim 2 and 9: Jeng provide a teaching where each arrangement of the first sequence of successive page identifier, have at least one closed hole location on the first correspond page of the first corresponding page spread (see Col. 5:12-22). Jeng does not provide teaching where at least one closed hole location having a first optical reflectance detectably different than a second optical of the first area adjacent to at least one closed-hole location. However, Kim provides a teaching at least one closed hole location having a first optical reflectance detectably different than a second optical of the first area adjacent to at least one closed-hole location (see Kim col. 4:35-43). Therefore it would have been obvious to one of ordinary skilled in the art to include the feature of at least one closed hole location having a first optical reflectance

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detectably different than a second optical of the first area adjacent to at least one closed-hole location, as taught by Kim, in order to increase the accuracy of the photo-sensors (see Kim col. 4:48-55).

Jeng does not provide a teaching of another set of page identifiers that correspond the other page spread. It would have been obvious to have a set of page identifiers that correspond the other page spread, having an overlay-able arrangement of adjoining open and close hole location, each successive arrangement of the decreasing in total number of open hole location by at least one open hole location by duplicating the code found in Jeng Col. 5:12-22 and arranging such that there is always one open hole difference between consecutive page (see Claim 1 rejection). Kim provides a teaching at least one closed hole location having a third optical reflectance detectably different than a fourth optical of the first area adjacent to at least one closed-hole location (see Kim col. 4:35-43). Therefore, it would have been obvious for one ordinary skilled in the art to include the feature of another set of page identifiers that correspond the other page spread, as taught by Kim, into the book-apparatus of Jeng in order to increase the accuracy of the photo-sensors (see Kim col. 4:48-55).

Claim 3, 5, 7 and 8: Jeng provides a teaching of having open hole location located on the first page and is defined by an elongated closed perimeter opening through the first page (see FIG 2 item H1-H3). Also Jeng's open hole location is located through the one page proximal a free page of a page (see FIG 2 item H1-H3).

Claim 4 and 6: Jeng does not provide a teaching of open hole that is defined by cutout extending inwardly from a proximal edge of the page. Instead Jeng provides a teaching of an elongated closed perimeter opening through the page

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to create a cutout extending inwardly from a proximal edge of the page. Because the applicant has not provide a particular advantage having create a cutout extending inwardly from a proximal edge of the page, or solved a particular problem. One of

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ordinary skilled in the art would have expected that the elongated closed perimeter opening through the page and the proposed cutout extending inwardly from a proximal edge of the page to work, would be able to perform the same function of letting light reach the photo sensors. Therefore, it would have been prima facie obvious to modify Jeng to obtain the invention as specified in claim 4 and 6 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Jeng.

Response to Arguments

9. Applicant's arguments filed 02/21/2008 have been fully considered but they are not persuasive.

10. The applicant argues that there is no objective teaching in Jeng that would enable one of ordinary skilled in the art to modify the Jeng book to arrive as the invention as claimed by the applicant. The examiner also argues that the encoding system is at least partially undetectable. The examiner respectfully disagrees.

11. With respect to the applicant's argument that there is no teaching in Jeng that would enable one of ordinary skilled in the art to modify the Jeng book to arrive as the invention as claimed by the applicant. The MPEP shows that an explicit motivation to combination is not required if the examiner can show that the motivation can be found in the knowledge of one of ordinary skill in the art (see MPEP 2143 (2100-138) part G). The examiner contends that the code reflection as shown in table 1 and table 2 would be obvious to one of ordinary skilled in the art because it would have enabled the 4-bit code to handle more pages. The examiner has shown in the rejection that all it requires is to duplicate the code (by code reflection) and duplicate the sensor array (to be sensor array position in the left and right side of the book). Since the suggested combination only involves opening and closing the optical sensors, one of ordinary skilled in the art would have expected that the new combination would not result in a new and unexpected results. One of ordinary skilled in the art would have expected the act of opening and closing the optical sensors as an indication of page turning would work. It has

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been held that mere duplication of essential working parts of device involves only routine skill in the art. *St Regis Paper Co. v. Bemis Co.* 193 USPQ 8.

12. With respect to applicant's argument that examiner's code suggestion would have to be contained in the two page spreads and the arguments that the reflective code (1111) prevents the subsequent underlying the code to be read by the detector array. The examiner respectfully disagrees. Since the applicant does not take into account the duplication of the sensor array (that is taught by Jeng on the right side see FIG. 5 P1-P4) to also appear in the left side of the book. The operation of such can be seen in the table 2 above. For example, the cover of the book can be detected by noting that all 4 page left sensors are all open and all 4 page right sensor are blocked; page 1 and 2 can be detected by noting that only 1 page left sensor is blocked and all 4 page right sensor are blocked; page 7 and 8 can be detected by noting that all page left and page right sensors are blocked; page 9 and 10 can be detected by noting that all page left sensors are blocked and having one open sensor in the page right sensor array and etc. Having the sensor array to appear on the left and right side of the book would enable the system to detect the maximum number of pages that can be detected in a system using 4 bit page.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT J. UTAMA whose telephone number is (571)272-1676. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezutto can be reached on (571)272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000

/R. J. U./
Examiner, Art Unit 3714

/Ronald Laneau/
Supervisory Patent Examiner, Art Unit 3714
04/22/08